

# Cumulative Review

Name: \_\_\_\_\_

Solve each equation for  $x$ .

1.  $3x + 1 = 4x - 2$

$x =$  \_\_\_\_\_

2.  $5(x - 6) - 2 = 2x - 5$

$x =$  \_\_\_\_\_

REMEMBER Apply the distributive property before you isolate the variable.

3.  $7x + 12 = 2(x + 6)$

$x =$  \_\_\_\_\_

4.  $3(x - 4) + 6 = 5(x - 1) + 1$

$x =$  \_\_\_\_\_

Convert the repeating decimal to a fraction.

5.  $0.\overline{6}$

\_\_\_\_\_

6.  $1.\overline{1}$

\_\_\_\_\_

7.  $4.\overline{4}$

\_\_\_\_\_

Complete each sentence.

8.  $-11.3$  is rational because \_\_\_\_\_

9.  $\sqrt{19}$  is irrational because \_\_\_\_\_

10.  $0.08\overline{3}$  is rational because \_\_\_\_\_

11.  $2.1371938\dots$  is irrational because \_\_\_\_\_

Evaluate each expression. Leave your answer in exponential form.

12.  $3^4 \times 3^2$

\_\_\_\_\_

13.  $9^7 \times 9^3$

\_\_\_\_\_

14.  $6^3 \times 6^3$

\_\_\_\_\_

REMEMBER You can multiply exponential expressions with like bases by adding the exponents.

15.  $5^5 \times 5^4$

\_\_\_\_\_

16.  $1^{11} \times 1^{-9}$

\_\_\_\_\_

17.  $x^3 \times x^{-6}$

\_\_\_\_\_

18.  $\frac{4^9}{4^7}$

19.  $\frac{2^{-10}}{2^4}$

20.  $\frac{z^{20}}{z^{10}}$